

CLAIMS

5 What is claimed is:

1. A pneumatic assembly for a paintball gun, comprising:

 a pneumatic piston slidably mounted in a cylinder, the cylinder configured to receive and
apply compressed gas to the pneumatic piston to control movement of the pneumatic piston;

10 a bolt coupled to the pneumatic piston, said bolt comprising a port disposed through a
lateral sidewall at a predetermined location along the bolt; and

 a sealing member arranged separately from and in communication with the bolt, wherein
the bolt is configured to move in a sliding relationship with respect to the sealing member such
that the sealing member prevents compressed gas from entering the bolt through the port when
the bolt is in an open position and compressed gas is allowed to enter the bolt through the port
15 when the bolt is in a closed position.

2. A pneumatic assembly according to claim 1, further comprising a valve stem,
wherein the bolt is slidably mounted on the valve stem and wherein the sealing member is
arranged on the valve stem in communication with an inner surface of the bolt.

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3. A pneumatic assembly according to claim 1, wherein the sealing member is
arranged in communication with an external surface of the bolt.

4. A pneumatic assembly according to claim 1, wherein the bolt is configured to be
25 closed by selectively supplying compressed gas to a rearward surface area of the piston.

5. A pneumatic assembly according to claim 1, further comprising a compressed
gas storage area, wherein the compressed gas storage area is configured to receive a
substantially constant supply of compressed gas and to supply compressed gas to the bolt
30 through the bolt port when the bolt is in an open position.

6. A pneumatic assembly according to claim 5, wherein the compressed gas storage
area is housed in a chamber body comprising an external indicator representing a volume of the
compressed gas storage area.

7. A pneumatic assembly according to claim 6, wherein the external indicator is a color.

8. A pneumatic assembly according to claim 1, further comprising a plurality of interchangeable compressed gas storage chambers, each compressed gas storage chamber having a different volume from the other compressed gas storage chambers, and wherein each compressed gas storage chamber is configured to selectively supply compressed gas to the bolt through the bolt port when used in the pneumatic assembly.

9. A pneumatic assembly according to claim 8, wherein each compressed gas storage chamber comprises an indicator representing a volume thereof relative to the volumes of the other compressed gas storage chambers.

10. A paintball gun, comprising:
a body;
a bolt slidably disposed in said body, the bolt comprising a bolt port;
a sealing member arranged in communication with the bolt, wherein the sealing member prevents compressed gas from entering the bolt through the bolt port when the bolt is in an open position; and

wherein said bolt port is configured to slide past the sealing member and convey compressed gas into the bolt when the bolt moves from the open position to a closed position.

11. A paintball gun according to claim 10, further comprising:
a pneumatic piston arranged in communication with the bolt, wherein movement of the piston controls movement of the bolt; and
a pneumatic cylinder housing said pneumatic piston, said pneumatic cylinder configured to receive compressed gas from a control valve to control movement of the pneumatic piston.

12. A paintball gun according to claim 11, wherein the control valve is an electronic solenoid valve.

13. A paintball gun according to claim 10, wherein the body is configured to receive a compressed gas storage chamber.

14. A paintball gun according to claim 13, further comprising an aperture formed through an external wall of the body to permit viewing of the compressed gas storage chamber when arranged in the body of the paintball gun.

15. A paintball gun according to claim 14, wherein the body is configured to receive one of a plurality of interchangeable compressed gas storage chambers, each compressed gas storage chamber comprising a external indicator representative of an internal volume of the compressed gas storage chamber.

16. A paintball gun, comprising:
a body;
a compressed gas storage area arranged within the body;
a bolt slidably arranged within the body and configured to selectively receive compressed gas from the compressed gas storage area through a bolt port and transmit the compressed gas into a breech area of the paintball gun; and
a sealing member arranged in a fixed position with respect to the body of the paintball gun, the sealing member further arranged in communication with a surface of the bolt, and the sealing member configured to prevent the bolt from receiving compressed gas through the bolt port when the bolt is in an open position and to allow the bolt to receive compressed gas through the bolt port when the bolt is in a closed position.

17. A paintball gun according to claim 16, wherein the sealing member is arranged in communication with an internal surface of the bolt.

18. A paintball gun according to claim 16, wherein the sealing member is arranged in communication with an external surface of the bolt.

19. A paintball gun according to claim 16, wherein the bolt is slidably mounted on a valve stem and wherein the sealing member is arranged on a forward end of the valve stem.

20. A paintball gun according to claim 16, further comprising a pneumatic piston coupled to the bolt to control movement thereof, wherein the pneumatic piston is arranged in a pneumatic cylinder that receives compressed gas from an electronic solenoid valve.

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